## REMARKS/ARGUMENTS

Claims 9-21 are pending in the present application. By this Amendment, claims 9, 10, and 18 are amended. Reconsideration of the claims is respectfully requested.

### I. 35 U.S.C. § 112, Second Paragraph, Claims 9-21

The examiner has rejected claims 9-21 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter, which applicants regard as the invention. This rejection is respectfully traversed.

The examiner stated:

> It is unclear from the way the claims are written whether, the *periodic basis* is reference to *receiv(-ing) cache data from a set of routers* or to the *stor(-ing)* in *stor(-ing) the cache data received.* Furthermore, it is unclear whether the *clearing* of the *cache data* is occurring in the *processing unit* or *from the set of routers.* Therefore the Examiner will interpret these limitations in the broadest reasonable sense.

Office Action dated April 9, 2008, page 2 (emphasis in original).

In response, Applicants have amended claims 9, 10, and 18 to recite "...in response to receiving the cache data, store the cache prior to clearing the cache data present in the set of routers..." to clarify that the periodic basis refers to receiving cache data from the set of routers and to clarify that the cache data is cleared from the set of routers.

As claims 11-17 and claims 19-21 are dependent claims depending from claims 9, 10, and 18, the amendments to claims 9, 10, and 18 to overcome the §112 rejection are also applicable to these dependent claims.

Therefore the rejection of claims 9-21 under 35 U.S.C. § 112, second paragraph has been overcome.

### II. 35 U.S.C. § 103, Obviousness, Claims 9-21

The examiner has rejected claims 9-21 under 35 U.S.C. § 103 as being unpatentable over Nelson et al. (U.S. Publication No. 2003/0005092 A1) (hereinafter "*Nelson*") in view of Messinger (U.S. Patent No. 6,425,007 B1) (hereinafter "*Messinger*") and further in view of Pham et al. (U.S. Publication No. 2003/0074473 A1) (hereinafter "*Pham*"). This rejection is respectfully traversed.

The examiner states:

> Regarding **claim 9, Nelson** teaches a bus system (Par. 18; reads on this limitation); a communications unit connected to the bus system (Figure 1 and Par. 9; internet connected devices); a memory connected to the bus system, wherein the memory includes a set of instructions (Figure 1 and Par. 49-50; ARP cache and databases).

**Nelson**, also teaches a processing unit connected to the bus system, wherein the processing unit executes the set of instructions to receive cache data from a set of routers in the data processing system on a periodic basis, wherein the cache data includes an identification of the nodes sending data packets onto the network data processing system (Figure 1 and Par. 18 & Par. 8 & 49-50; ARP cache, ARP table walk and periodic searches and periodic collections); identify the nodes on the network data processing system using the cache data from the set of routers (Figure 1 and Par. 18 & Par. 8 & 49-50; ARP cache, ARP table walk and periodic searches and periodic collections).

**Nelson** does not explicitly teach generating a display of the nodes in a graphical view comprising communications paths between the nodes with a graphical indication of network traffic volume using the cache data received on a periodic basis, wherein the graphical view includes network traffic volume and node relationships over time.

However, **Messinger** discloses generating a display of the nodes in a graphical view comprising communications paths between the nodes with a graphical indication of network traffic volume using the cache data received on a periodic basis, wherein the graphical view includes network traffic volume and node relationships over time (Figures 1-4 and Abstract and Col. 5 lines 61-66; graphically depicting network traffic).

**Nelson** and **Messinger** are analogous art because they are from the same field of endeavor of network management. At the time of the invention, it could have been obvious for one of ordinary skill in the art, having the teachings of **Nelson** and **Messinger** before him or her, to incorporate a the identification of nodes on a network data processing system using cache data from a set of routers (i.e. ARP table walk), as disclosed by **Nelson**, with a graphical display of the network traffic volume, as disclosed by **Messinger**.

The suggestion for doing so would have been where **Nelson** mentions (Par. 50, lines 14-15) that any of the discovery techniques he discussed could be used in conjunction with other discovery techniques.

Therefore, it would have been obvious to combine **Nelson** with **Messinger** to obtain the invention as specified in the instant claim.

Furthermore, **Nelson** and **Messinger** don't seem to explicitly disclose wherein *the cache data is cleared on a periodic basis from the set of routers.*

In the same field of endeavor, **Pham** discloses wherein *the cache data is cleared on a periodic basis from the set of routers* (Figures 5-6 & 11 and par. 50; dynamic data store & data modified and deleted).

It would have been obvious to one of ordinary skill in the art at the time of the present invention to modify the teachings of **Nelson** and **Messinger** with that of **Pham** to allow for a more robust and efficient system.

Office Action dated April 9, 2008, pages 3-5 (emphasis in original).

The examiner bears the burden of establishing a *prima facie* case of obviousness based on the prior art when rejecting claims under 35 U.S.C. § 103. *In re Fritch*, 972 F.2d 1260, 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992). For an invention to be prima facie obvious, the prior art must teach or suggest all claim limitations. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). Independent claim 9, which is representative of independent claims 10 and 18 with regard to similarly recited subject matter, reads as follows:

9. A data processing system for identifying nodes in a network data processing system, the data processing system comprising:

a bus system;

a communications unit connected to the bus system;

a memory connected to the bus system, wherein the memory includes a set of instructions; and

a processing unit connected to the bus system, wherein the processing unit executes the set of instructions to receive cache data from a set of routers in the data processing system on a periodic basis, wherein the cache data includes an identification of the nodes sending data packets onto the network data processing system; in response to receiving the cache data, store the cache data prior to clearing the cache data present in the set of routers, wherein the stored cache data comprises snapshots of cache data previously present in the set of routers over time; identify the nodes on the network data processing system using the stored cache data from the set of routers; and generate a display of the nodes in a graphical view comprising communications paths between the nodes with a graphical indication of network traffic volume using the stored cache data, wherein the graphical view includes network traffic volume and node relationships over time.

Claim 9 recites the features of receiving cache data from the routers on a periodic basis. Claim 9 also recites that when cache data is received (on the periodic basis), this cache data is stored. Claim 9 further recites that after this cache data is stored, the cache is cleared. By receiving cache data periodically, storing this periodically-received cache data, and then clearing the cache(s) each time cache data is received, the stored cache data comprises snapshots of the routers' cache data at various points in time. Additionally, the claim recites that the caches at the routers are cleared when cache data is received from the routers. Consequently, when the next cache data is received from the routers at a later point in time (received on the periodic basis), this cache data will comprise new cache data. Thus, the stored cache data in claim 9 includes historical cache data (cache data no longer present in the caches) of the routers.

*Nelson*, *Messinger*, and *Pham*, either alone or in combination, do not teach or suggest in response to receiving cache data from the set of routers, storing the cache data prior to clearing the cache data present in the set of routers, wherein the stored cache data comprises snapshots of the cache data over time as recited in amended claim 9 of the present invention. The Examiner does not point to or cite any section of *Nelson* and *Messinger* that teaches or suggests storing the cache data in response to receiving cache data, storing the cache data prior to clearing the cache data present in the routers, or that the stored cache data comprises snapshots of the cache data over time.

Instead, the Examiner relies on the *Pham* reference as teaching this feature. Specifically, the Examiner states that *Pham* teaches "wherein the cache data is cleared on a periodic basis from the set of routers". The sections of *Pham* cited by the Examiner are reproduced below:

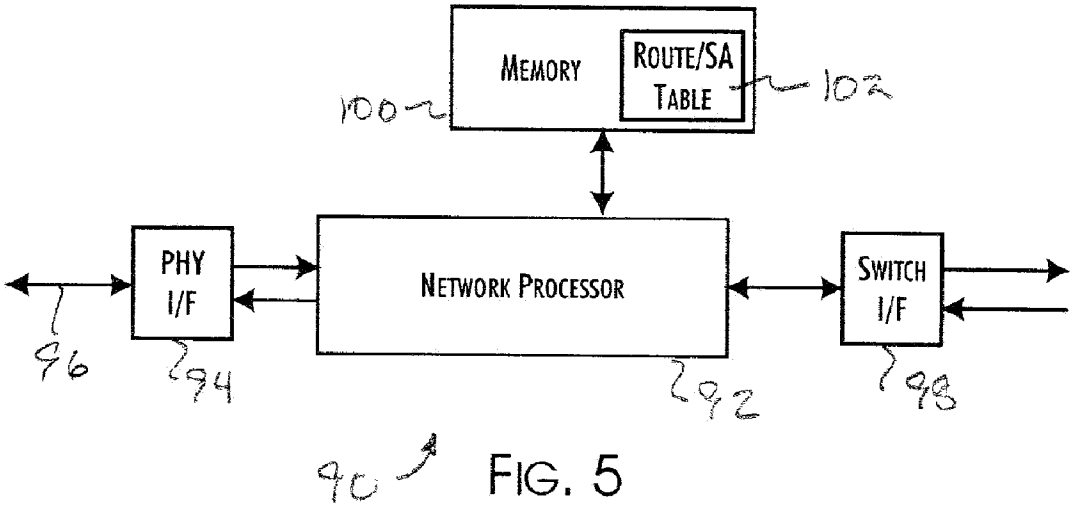



FIG. 5

*Pham*, Figure 5.

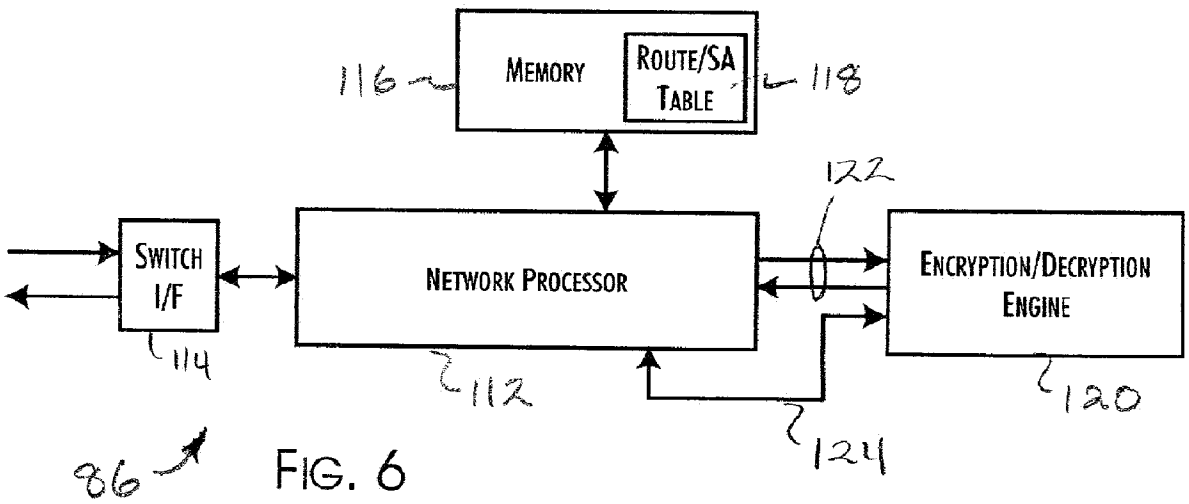
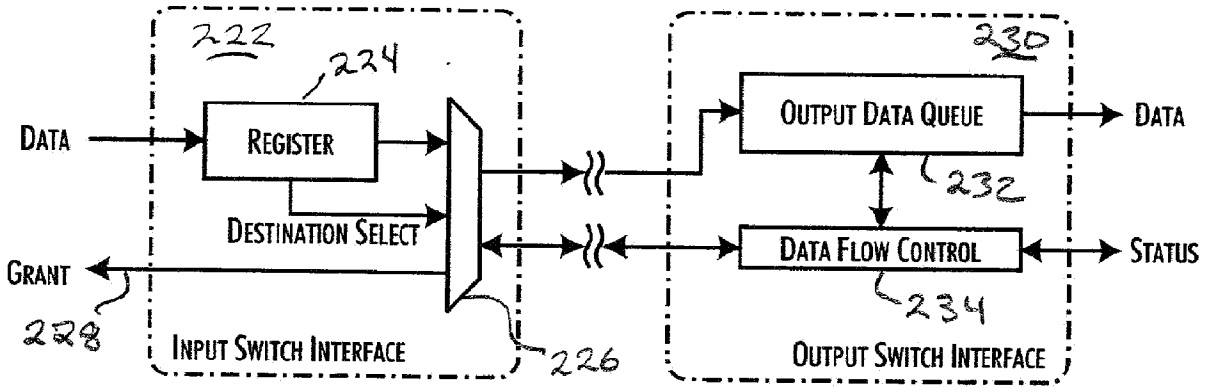



FIG. 6

*Pham*, Figure 6.

FIG. 11




*Pham*, Figure 11.

> Finally, an array of high-speed memory **100** is provided to satisfy the external memory and program storage requirements of the network processor **92.** Included within this memory **100** is a data table **102** providing a dynamic data store for accumulated routing and filtering information. For implementations of the ingress processor **80** utilized in preferred embodiments of the present invention, the data table **102** also stores network connection SA parameter data. The route and filtering data are accumulated in a conventional manner from inspection of the attached interfaces and the source addresses of data packets received through the interfaces. The SA parameter data is explicitly provided and, as appropriate, modified and deleted by the control processor **84** in response to the creation, maintenance, and dropping of IPsec connections that are routed through the VPN gateway **72.** Preferably, the SA parameter data is used by the ingress processor **80** to dynamically create and attach SA headers to each received IPsec data packet. Thus, in accordance with the preferred embodiment of the present invention, each IPsec data packet transferred to a crypto processor **86** is packaged with all of the necessary SA information needed for IPsec protocol processing.

*Pham*, paragraph 50.

Figure 5 of *Pham* and associated text in paragraphs 049-050 disclose a communications processor implementation that comprises an ingress/egress network processor 92 that supports a bidirectional layer 1 physical interface 94 to a network 96, a serial data switch interface 98, a memory array 100 comprising a data table 102 providing a dynamic data store for accumulated routing and filtering information. *Pham* also discloses that the data table stores network connection secure authority parameter data, and the secure authority parameter data is explicitly provided and modified and deleted by the control processor 84 in response to the creation, maintenance, and dropping of IPSec connections that are routed through the VPN gateway. Figure 6 of *Pham* illustrates a crypto processor 86 comprising a network processor

112, a switch fabric interface 114, a memory array 116 containing a data table118, and an encryption/decryption engine 120. Figure 11 of *Pham* illustrates the port interfaces 220 of the preferred switch fabric 78 in Figure 4. While the cited sections of *Pham* disclose a dynamic data store that comprises secure authority parameter data that may be modified and deleted in response to the creation, maintenance, and dropping of IPSec connections routed through the VPN gateway, *Pham* does not teach or suggest storing cache data prior to clearing the cache data present in the routers and that the stored cache data comprises snapshots of the cache data over time as recited in the presently claimed invention. Rather *Pham* merely discloses that data may be deleted from the data store in response to IPSec connections being created, maintained, or dropped. Thus, in *Pham*, data in a data store may be deleted from the data store, but no mention is made as to having this deleted data received at and stored in another location, nor if there any mention of data being periodically received and stored which comprises snapshots of the cache data over time. In contrast, the presently claimed invention recites when data is received from a cache at a router, the data is stored prior to removing the data from the cache at the router. Since cache data is periodically received from the routers, the stored data will comprise snapshots of the cache data over a period of time. *Pham* does not disclose that removing the data present in the data store allows for creating snapshots of the cache data over time. Rather, *Pham* merely discloses that data in the data store may be modified or deleted from the data store.

Additionally, the Examiner failed to state a *prima facie* obviousness rejection against claim 1 because the Examiner failed to state a proper reason to combine the references under the standards of *KSR Int'l.* Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *KSR Int'l. Co. v. Teleflex, Inc.*, No. 04-1350 (U.S. Apr. 30, 2007). (citing *In re Kahn*, 441 F.3d 977, 988 (CA Fed. 2006)).

Regarding a reason to combine the references, the Examiner states:

> It would have been obvious to one of ordinary skill in the art at the time of the present invention to modify the teachings of **Nelson** and **Messinger** with that of **Pham** to allow for a more robust and efficient system.

Office Action dated April 29, 2008, page 7.

However, this reason is not a rational underpinning to support the legal conclusion of obviousness of the claim in view of the combination of the references when considered as a whole. The Examiner fails to state why one of ordinary skill in the art would look to modify *Nelson's* method of locating and recovering devices such as missing or stolen hardware which are connected to a network (*Nelson*, Abstract) and *Messinger's* method of providing a network navigation and viewing system that generates a graphical image depicting a logical organization of a network (*Messinger*, Abstract) with *Pham's* method

of providing a network component capable of performing compute intensive data packet processing at wire-speeds" (Pham, paragraph 0012). *KSR Int'l.* requires that the Examiner provide a rational underpinning to support the legal conclusion of obviousness. By failing to state why one of ordinary skill in the art would look to modify the method as taught by the *Nelson* and *Messinger* references with the method as taught by the *Pham* reference, the Examiner has failed to provide a basis to support the legal conclusion of obviousness. Instead, the Examiner has only provided a conclusory statement and then assumed the legal conclusion without the required analysis. Therefore, the Examiner's statement does not provide a rational underpinning to support the legal conclusion of obviousness, as required by *KSR Int'l.* As a result, the Examiner failed to state a *prima facie* obviousness rejection against claim 1.

Consequently, as *Nelson*, *Messinger*, and *Pham*, either alone or in combination, fail to teach or suggest all of the features of claims 9, 10, and 18, the rejection of claims 9, 10, and 18 has been overcome.

In addition, since claims 11-17 and claim 21 depend from claim 10, and claims 19-20 depend from claim 18, the same distinctions between *Nelson*, *Messinger*, and *Pham*, and the claimed invention in claims 11-17 and 19-21 apply for these dependent claims. Furthermore, these dependent claims include additional features not found in the cited reference.

For example, claim 13 recites identifying network traffic on the communication paths using the **stored** cache data. The examiner alleges that this feature is taught by the ARP cache and the ARP table walk feature of *Nelson*. However, the table walk technique of *Nelson* is a process for looking at each entry in turn. Since ARP caches are flushed on a regular, periodic basis, the information used in the table walk technique of *Nelson* is **current** cache data. Thus, the information in the table walk technique in *Nelson* is perishable, as only current cache data is used in the table walk. In contrast, the presently claimed invention uses **stored** cache data and this stored cache data comprises "snapshots" of cache data previously present in the set of routers over time. In other words, the presently claimed invention takes multiple snapshots of the cache data and stores the data. In addition, the presently claimed invention also flushes the caches each time a cache data snapshot is received from the routers. Thus, the stored cache data in the presently claimed invention comprises historical cache data from the routers, not merely cache data currently present in the router caches. *Nelson* only discloses using current cache data, and does not provide any suggestion or motivation for using stored data which includes data no longer present in the cache in the table walk. Consequently, *Nelson* cannot teach or suggest identifying network traffic on the paths using the stored cache data.

In addition, claim 14 recites wherein the stored cache data received on the periodic basis is used to validate service level agreement compliance. Although the examiner alleges that *Messinger* teaches cache data used to validate service level agreements, the sections cited by the examiner merely discuss

how bandwidth and communications information may be useful in determining whether sufficient bandwidth capacity already exists or whether more should be provided. *Messinger* does not teach a service level agreement. As known in the art, a service level agreement comprises a contract between two parties which specifies the level of service (e.g., availability, serviceability, performance, operation, billing, etc.) expected from the service provider, as well as, in some instances, penalties in case the service level agreement is violated. There is no mention in *Messinger* of employing a service level agreement, nor of validating a service level agreement using the stored cache data. In addition, in contrast the presently claimed invention which uses historical cache data to perform a service level agreement validation, *Messinger* does not specify how or where the base data for performing such a validation would come from.

Furthermore, claim 16 recites where the agents clear the set of address resolution protocol caches each time data is sent to the data processing system. In contrast with the router configuration item which is set by the installer and maintainer of the router (the "inherent feature among routers"), claim 16 recites allowing the agents in the router to alter the static configuration setting by being able to flush the cache. While the static configuration uses a time out merely to rid the cache of stale information, the feature of claim 16 of having agents clear the cache on a controlled or algorithmic basis allows for storing snapshots of cache data in order to view traffic patterns as they emerge over differing time frames, and thereby creating better statistical data.

Therefore, the rejection of claims 9-21 under 35 U.S.C. § 103 has been overcome.

## III. Conclusion

It is respectfully urged that the subject application is patentable over the cited references and is now in condition for allowance.

The examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

DATE: July 2, 2008

Respectfully submitted,

/Cathrine K. Kinslow/

Cathrine K. Kinslow
Reg. No. 51,886
Yee & Associates, P.C.
P.O. Box 802333
Dallas, TX 75380
(972) 385-8777
Attorney for Applicants